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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-------------------------|-------------|-----------------------|---------------------|------------------|
| 10/657,851 | 09/09/2003 | Christopher J. Murphy | TPLANT-08360 | 2123 |
| 23535 | 7590 | 07/17/2007 | EXAMINER | |
| MEDLEN & CARROLL, LLP | | | LIU, SAMUEL W | |
| 101 HOWARD STREET | | | ART UNIT | PAPER NUMBER |
| SUITE 350 | | | 1656 | |
| SAN FRANCISCO, CA 94105 | | | MAIL DATE | DELIVERY MODE |
| | | | 07/17/2007 | PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | |
|------------------------------|------------------------|---------------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 10/657,851 | MURPHY ET AL. |
| | Examiner | Art Unit |
| | Samuel W. Liu | 1656 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 3/9/07 & 4/13/07.
 2a) This action is **FINAL**. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 53-67 is/are pending in the application.
 4a) Of the above claim(s) none is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 53,56,59,60,63 and 66 is/are rejected.
 7) Claim(s) 54,55,57,58,61,62,64,65 and 67 is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
 3) Information Disclosure Statement(s) (PTO/SB/08)
 Paper No(s)/Mail Date 3/9/07.

4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____.
 5) Notice of Informal Patent Application
 6) Other: _____

DETAILED ACTION

Status of claims

Claims 53-67 are pending.

The terminal disclaimer filed 4/13/07 disclaiming the terminal portion of any patent granted on this application, which would extend beyond the expiration date of US Pat. NO. 6696238 has been reviewed and are accepted. The amendment filed 3/9/07, which cancels claims 1-52, amends claims 55, 58-60 and 66-67 has been entered. Claims 53-67 are examined in this Office action.

IDS

The references cited in the IDS filed 3/9/07 which can be found in the parent application 09917340 have been considered by Examiner.

Withdrawal of the objections and rejections

- The objection to the specification is withdrawn in light of the amendment to the specification.
- The objection to Figure 9 is withdrawn in light of the amendment to the figure.
- The rejection of claim 58 under 35 USC, second paragraph is withdrawn in light of the amendment to the claim.
- The obviousness double patenting rejection of claims 53 and 56-62 over US Pat. No. 6696238 is now withdrawn in light of filed the terminal disclaimer.

New-Duplicate Claims -Warning

Applicant is advised that should claims 66 and 60 be found allowable, claims 66 and 60 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims

in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

New-Claim Rejections - 35 USC §102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 53, 56, 59-60, 63 and 66 are rejected under 35 U.S.C. 102(b) as being anticipated by Kwock et al. (*J. Nutr.* (1984) 114, 1451-1461).

Kwock et al. teach a cow milk composition comprising ferric iron bound lactobionate (see Table 3, page 1457). Since the cow milk contains the average level of IGF-1 of 3.7 ng/ml (see "*Discussion of art*"-1), Kwock et al. inherently teach the composition of claim 53.

It is of note that "for organ preservation" in claim 53 refers to an intended use and has no patentable weight.

Because the milk comprises the antimicrobial peptide, e.g., nisin, in the milk (see "*Discussion of art*"-2), the above Kwock et al. teaching inherently anticipates claim 56.

The nisin peptide in said milk is about 0.045 mg/ml (45 ng/ml) (see "*Discussion of art*"-2), which anticipates claim 59.

Since the raw milk comprises nerve growth factor (see “*Discussion of art*”-3), the above Kwock et al. teaching inherently anticipates claim 63.

Since Ferric iron bound lactobionate has 17.1% retention in the cow’s milk (see Table), and since the cow’s milk contains 0.15 mg/100 ml (see “*Discussion of art*”-4) and iron has molecular weight of 55.84, the result of calculation ($[0.15/100/55.84] \times 17.1\%$ mole in 1000 ml) is ~ 4.6 mM, which inherently anticipates claim 60 and 66.

Claims 54-55, 57-58, 61-62, 64-65 and 67 are objected to as being dependent upon a rejected base claim 53, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

No claims are allowed.

The following art made of record and not currently relied upon in any rejections is considered pertinent to Applicants' disclosure:

(1) Goldstein et al. (*J. Reproduct. Med.* (2007) 52, 140-141) teach that cow milk contains the average level of IGF-1 of 3.7 ng/ml (page 140).

(2) Hakovirta et al. (*Appl. Environ. Microb.* (20060 72, 1001-1005) teach that there is the detectable level (~ 45 ng/ml) of antimicrobial peptide nisin in the milk (see page 101, left column, and Table 2, page 1004).

(3) Raw-milk-facts (“Hormones and growth factors in raw milk” (2007, updated) <http://www.raw-milk-facts.com/hormones.html>., pages 1-7) teach the raw milk comprises nerve growth factor.

(4) Frederick et al. (*J. Biol. Chem.* (1931), 92, 237-240) teach cow's milk contains 0.15 mg/ml (cc) of iron.

* The art does not teach level of nerve growth hormone (NGF) in either cow or human milk, nor the ratio of NGF to IGF-1, the art does not teach instant claim 64 limitation.

Conclusion

No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Samuel Wei Liu whose telephone number is 571-272-0949. The examiner can normally be reached from 9:00 a.m. to 5:00 p.m. on weekdays. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kathleen Kerr Bragdon, can be reached on (571) 272-0931. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval PAIR system. Status information for published applications may be obtained from either Private PAIR or Public PAG. Status information for unpublished applications is available through Private PAG only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SWL

Samuel Wei Liu, Ph.D.
Patent Examiner, Art Unit 1656
July 1, 2007

Kathleen Kerr Bragdon
KATHLEEN KERR BRAGDON, PH.D.
SUPERVISORY PATENT EXAMINER